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10/560,762	07/20/2006	Andre Lambert	1022702-000299	5135
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EXAMINER				
CHIRISS, JENNIFER A				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

### Office Action Summary

**Application No.**

10/560,762

**Applicant(s)**

LAMBERT ET AL.

**Examiner**

JENNIFER A. CHRISS

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 24 - 27, 30 - 34, 37 - 43 is/are pending in the application.
- 4a) Of the above claim(s) 40-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24 - 27, 30 - 34, 37 - 39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB008)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed February 19, 2008 and November 12, 2008, have been entered and have been carefully considered. Claims 24, 30, 32, 37, 38, 40 and 42 are amended, claims 28 - 29 and 35 - 36 are cancelled, claim 43 is added and claims 24 - 27, 30 - 34 and 37 - 43 are pending. In view of the cancellation of claim 35, the claim objection as detailed in the previous Office Action has been withdrawn. In view of Applicant's change of claim dependency of claim 41, the Examiner withdraws the 35 USC 112, 2<sup>nd</sup> paragraph rejection as detailed in the previous Office Action. The Examiner acknowledges the Terminal Disclaimer filed on February 19, 2008 and it has been entered and accepted. The Double Patenting rejection over Application 10/523,420 (now US Patent 7,416,780) has been withdrawn. After review of the previous Examiner's rejections in the Office Action dated October 17, 2007, the Examiner has withdrawn all previously set forth rejections. The invention as currently claimed is not found to be patentable for reasons herein below.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Election/Restrictions***

3. Applicant's election with traverse of Group I, claims 24 - 27, 30 - 34 and 37 - 39 in the reply filed on November 12, 2008 is acknowledged. The traversal is on the ground(s) that the Examiner has already searched and examined all claims of Groups I

and II (with the exception of new claim 43) and as a result this restriction will not reduce the workload of the USPTO or simplify prosecution of the case. This is not found persuasive because search and examination of the claims of Group II and Group III pose a burden for the new Examiner of the case. Although a search was performed by a previous Examiner in the Non-Final Office Action of October 17, 2007, the new Examiner submits that an undue burden is placed upon the examiner for reasons set forth in the restriction requirement of October 23, 2008. According to MPEP 811, the time for making the requirement may be made any time before final action.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then

narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 25 recites the broad recitation "flame retardant additive has a concentration by weight of between 0.5% and 25%", and the claim also recites "optionally, between 1% and 10%" which is the narrower statement of the range/limitation.

#### ***Claim Rejections - 35 USC § 103***

6. Claims 24 – 27, 30 – 34, 37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable by Atarashi et al. (US 6,025,421 A) in view of Kowaki et al. (JP 2003-166124) and further in view of Abolins et al. (US 4,233,199 A).

Atarashi et al. is directed to a thermoplastic flame-retardant composition (Abstract).

As to claims 24 - 25, Atarashi et al. teach that the composition can contain 100 parts by weight of thermoplastic resin, 5 - 100 parts by weight of the inorganic filler surface-treated with a phosphate and 5 - 50 parts by weight of an aromatic orthophosphate (Abstract). Atarashi et al. teach that the inorganic filler can comprise metal oxides like titanium oxide, magnesium hydroxide, or silica and can be in the form of particle, powder or bulk (column 3, lines 40 – 55); the Examiner equates the inorganic

filler in particle form to Applicant's "granules". Atarashi et al. teach that the thermoplastic resin can comprise polyethylene, polypropylene, polyethylene terephthalate, polyamide etc. (column 2, lines 40 – 55).

As to claims 26 and 31, Atarashi et al. teach that the inorganic filler can comprise metal oxides like titanium oxide, magnesium hydroxide, or silica (column 3, lines 40 – 55).

As to claims 33 – 34, Atarashi et al. teach that the phosphate surface treatment can comprise an aromatic orthophosphate (column 2, lines 1 - 65 and column 3, lines 5 - 20).

As to claim 37, Atarashi et al. teach that the thermoplastic resin can comprise polyethylene terephthalate (column 2, lines 40 – 55). It should be noted that polyethylene terephthalate has 100% ethylene terephthalate units which is encompassed by Applicant's claim.

As to claim 39, Atarashi et al. teach that the thermoplastic resin may additionally contain a pigment, a plasticizer, a lubricant foam stabilizer, etc. (column 4, lines 25 – 35).

Atarashi et al. teach the claimed invention but fail to teach that the composition is extruded into a fiber or yarn.

Kowaki et al. is directed to a flame-retardant polyester-based fiber (Abstract). Toshiro et al. note that the fiber maintains its physical textile properties such as strong ductility while providing fire-retardancy which is drip-proof [0008]. Kowaki et al. teach

melt spinning a mixture of polyester, polyacrylate and a non-halogen fire retardant in a specific ratio to create a polyester fiber [0009]. Kowaki et al. teach that the flame retardant can comprise a phosphorus series flame retardant [0033] and can be added in an amount ranging from 0.05 – 15% by weight [0040]. The fiber can comprise additional ingredients such as additive agents [0065 - 0066]. Kowaki et al. teach that the fiber can be used as artificial hair (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to extrude the composition of Atarashi et al. into a fiber as suggested by Kowaki et al. motivated by the desire to use the thermoplastic resin composition in a suitable final product, such as artificial hair, which has excellent flame retardancy.

Atarashi et al. in view of Kowaki et al. teach the claimed invention but fail to teach that the filler is porous and has a pore volume of at least 0.5 ml/g as required by claims 24 and 32, the flame retardant additive is composed of particles or aggregates where at least 80% by number exhibit a size less than 1 micron as required by claim 27 and the granules or agglomerates have a mean diameter (D50) of greater than or equal to 60 microns as required by claim 30.

Abolins et al. is directed to a flame resistant thermoplastic composition with well balanced properties (Title). Abolins et al. teach resins having a good balance of physical properties including a flame retardant component and a fine particulate solid material of a porous character (Abstract). Abolins et al. teach that the filler is openly porous in order

to absorb or imbibe organic liquids in relatively large proportions (column 3, lines 40 – 65). Abolins et al. teach various natural and synthetic porous fillers such as ones that have a particulate size of less than 250 mils (claim 11), which is equivalent to less than 6350 microns.

It would have been obvious to one of ordinary skill in the art to use a porous filler having particular desired diameter as discussed by Abolins in the flame-retardant thermoplastic fiber of Atarashi in view of Kowaki et al. motivated by the desire to use a suitable solid filler which is capable of absorbing large amounts of organic liquids, such as a flame-retardant composition, in order to create a thermoplastic fiber having superior flame-retardant properties.

Atarashi in view of Kowaki et al. and Abolins et al. teach the claimed invention above but fails to teach that the pore volume is at least 0.5 ml/g. It is reasonable to presume that the pore volume is inherent to Atarashi in view of Kowaki et al. and Abolins et al. Support for said presumption is found in the use of like materials (i.e. a porous silica filler) which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would obviously have been present once the Atarashi in view of Kowaki et al. and Abolins et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977). Reliance upon inherency is not improper even though the rejection is based on Section 103 instead of 102. *In re Skoner*, et al. (CCPA) 186 USPQ 80.



7. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atarashi et al. (US 6,025,421 A) in view of Kowaki et al. (JP 2003-166124) and further in view of Abolins et al. (US 4,233,199 A), as applied above, and further in view of Plastics Engineering Manufacturing and Data Handbook by Rosato et al.

Atarashi in view of Kowaki et al. and Abolins teach the claimed invention above. Atarashi teach that the thermoplastic resin can comprise polyamide (column 2, lines 45 - 50) but fail to teach the use of a specific polyamide selected from the group consisting of polyamide 6, polyamide 6,6, polyamide 4, polyamide 11, polyamide 12, polyamide 4,6, polyamide 6, 10, polyamide 6,12, polyamide 6,36 or polyamide 12, 12.

According to Plastics Institute of America Plastics Engineering Manufacturing and Data Handbook, nylon or polyamide was the first of the so-called thermoplastic engineering plastics in the 1930s. Nylon 6,6 is the most widely used, followed by nylon 6, with similar properties except that it absorbs moisture more rapidly and its melting point is lower. Nylon 11 and 12 have better dimensional stability and electrical properties than the others because they absorb less moisture. Nylon 6,10 and 6,12 are used where lower moisture absorption and better dimensional stability is needed (pages 219 - 220).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the particular polyamides discussed in the Plastics Institute of America Plastics Engineering Manufacturing and Data Handbook motivated by the desire to use the appropriate polyamide depending on the desired properties.

***Response to Arguments***

8. Applicant's arguments with respect to claims 24 – 27, 30 – 34 and 37 - 39 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. CHRISS whose telephone number is (571)272-7783. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 6 p.m., first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A Chriss/  
Examiner, Art Unit 1794

/J. A. C./  
Examiner, Art Unit 1794

